Mlle P. SHINNIE E-6

ISR-OP/IB/svw 25th October, 1972

ISR PERFORMANCE REPORT

Run 244F, Both Rings

"Pseudo-Brickwall" losses during stacking

Several times during stacking both rings on Run 244F we experienced "pseudo-brickwall" losses. These were eventually traced to the addition of the "Brouzet fenêtre".

The timing sequence of the inflector demands that an early pre-pulse be sent to the relevant auxiliary building to actuate the shutter, which is normally in its open gap position. The movement sequencer is then reset by the inflector timing pulse, which is generated in the MCR. Up to 23.10.72, these inflector pulses were sent from MCR to A2 or A7 regardless of whether there was an actual PS ejection or not (i.e. if the PS went "off the air" for a few pulses, the inflector continued to kick.)

However, with the addition of the Brouzet fenêtre, which measures the PS intensity and radial position 10 msec before ejection, and inhibits ejection towards the ISR if pre-set criteria are not met, the inflector pulses were not transmitted in the case of a "bad" PS beam.

Thus, the following condition existed : the shutter received an early pulse to actuate the mechanism. The shutter closed, but no beam, and,more important, no inflector pulse was sent from the PS. The shutter then opened again, but the movement sequencer was not reset. Thus, at the next successful PS ejection, the inflector kicked with the shutter open, causing the loss of beam from the stack.

The remedy to this problem is to remove the necessity of having the inflector pulse reset the movement sequencer. This was originally intended to stop the shutter moving unnecessarily in its UHV environment, but experience has shown that this is not really needed.

I. J. Barnett